AMENDMENTS TO THE DRAWINGS

Fig. 5 has been amended to recite "Prior Art," as suggested by the Examiner. The attached replacement sheets of drawings include changes to Fig. 5.

REMARKS

Claims 1-9 are pending in the present application. Reconsideration in view of the following remarks is respectfully requested.

Rejections to the Drawings

Fig. 5 has been amended to recite "Prior Art," as suggested by the Examiner. The attached replacement sheets of drawings include changes to Fig. 5.

Claim Rejections - 35 U.S.C. §103

As to the merits of this case, the Examiner sets for the following rejection:

claims 1-9 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Suehiro et al.* "Very Efficient Wireless Frequency Usage by Coherent Addition of Multipath Signals Using ZCCZ Sequence Set", Graduate School of Systems and Information Engineering, July 2002.

This rejection is respectfully traversed.

Independent Claim 1:

Independent claim 1 calls for a transmission method comprising the steps of:

producing a plurality of finite-length signals of a length Nm

$S_{A,X}=(x_0A, 0...0, x_1A, 0...0, x_2A, 0...0, ..., x_{m-1}A, 0...0)$

$S_{B,Y}=(y_0B, 0...0, y_1B, 0...0, y_2B, 0...0, ..., y_{m-1}B, 0...0)...$

using a plurality of data sequences

$A=(a_0a_1...a_{N-1})$, $B=(b_0b_1...b_{N-1})$, ... and

a plurality of coefficient sequences

$X=(x_0x_1...x_{m-1})$, $Y=(y_0y_1...y_{m-1})$, ...;

repeating each finite-length signal of said finite-length signals $S_{A,X}$, $S_{B,Y}$, ... to produce a pseudo periodic signal ..., $S_{A,X}$, $S_{A,X}$, $S_{A,X}$ ..., ..., $S_{B,Y}$, $S_{B,Y}$, $S_{B,Y}$, ..., ...; and

cutting out a part from said pseudo periodic signal to produce a signal of a predetermined length longer than Nm for making said signal a transmission signal.

Independent claim 9 includes similar features and was rejected by the Examiner based on the same grounds and arguments as claim 1.

The Examiner admits that the "producing," "repeating," and "cutting" features of claim 1 are not taught by *Suehiro*. However, the Examiner assets that these features are nonetheless obvious in view of the reference. Specifically, the Examiner cites Sections 2 and 3 of the

reference as suggesting the "producing" and "repeating" features of claim 1. Also, the Examiner cites Section 4 of the reference as suggesting the "cutting" feature of claim 1.

Applicant respectfully disagrees with the Examiner's position that the "producing," "repeating," and "cutting" features of claim 1 are obvious in view of *Suehiro*. Applicant asserts that the object of the present invention is to reduce an increase in amplitude of the signal during the modulation of transmission data through spread spectrum, and to reduce the dynamic range of an amplifier. *Suehiro* does not suggest the transmission data sequences of claim 1 having a data structure wherein a plurality of transmission data are arranged with 0 data of a predetermined length added between the plurality of the transmission data.

Sections 2 and 3 of *Suehiro*, as cited by the Examiner, include no equations which suggest the insertion of 0 data of a predetermined length as part of "producing a plurality of transmission data sequences." In addition, the sections do not suggest "repeating each finite-length signal of said finite-length signals $S_{A,X}$, $S_{B,Y}$, ... to produce a pseudo periodic signal ..., $S_{A,X}$, $S_{A,X}$, $S_{A,X}$ ..., ..., $S_{B,Y}$, $S_{B,Y}$, $S_{B,Y}$, ..., ..." Sections 2 and 3 do not suggest the "repeating" feature, rather, the reference suggest a set of *different* periodic signals that do not repeat. See, Section 3, equation 1 of *Suehiro*.

Section 4 does not suggest "cutting out a part from said pseudo periodic signal to produce a signal of a predetermined length longer than Nm for making said signal a transmission signal."

The example in Section 4 involves the cutting of a sequence from an infinite length sequence and *not* from a pseudo periodic signal. See, Section 4, para. 4 of *Suehiro*.

Therefore, the "producing," "repeating," and "cutting features of claim 1 are not obvious in view of *Suehiro*.

The Examiner asserts that the "producing," "repeating," and "cutting" features of claim 1 would be obvious to incorporate into the system of *Suehiro* in order to produce the benefit of mitigating the effects of intersymbol interference. Specifically, the Examiner stated in the Office Action that, "one skilled in the art would know that the insertion of guard bands between symbols is *notoriously well known in the art*, and they are mainly used to prevent intersymbol interference."

The Examiner has taken Official Notice of the aforementioned statements, although the rejection does not specifically say as such. Applicant wishes to traverse "official notice" taken by Examiners and strongly requests that the Examiner provide a reference to support his position.

The "insertion of guard bands" method invoked by the Examiner is not mentioned in the reference. The Examiner did not provide any other reference citation for the origin of these "guard bands" nor did the Examiner explain what the "guard bands" are or how they would be

added. There is also no suggestion in the reference to modify the reference to include "guard bands."

Therefore, even if, assuming that the Examiner means the "guard bands" to be the 0 data of claim 1, the addition of "guard bands" to the reference would destroy the object and purpose of the reference. Specifically, the method and examples given in *Suehiro* involve signals that come from a set of periodic sequences. For example, Section 4 of the reference notes that A is a periodic sequence and A' is obtained by cutting a sequence of a certain length from the infinite length sequence (...AAAA...). Therefore, the signal A' of the reference can only be made up of the periodic sequence A, and not of any other data source (i.e., "not from a guard band").

As such, it is submitted that the Examiner has failed to establish a prima facie case of obviousness with regard to the features set forth in independent claims 1 and 9.

In view of the above remarks, Applicant submits that the claims are in condition for allowance. Applicant requests such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

Thomas E. Brown
Attorney for Applicants
Registration No. 44,450
Telephone: (202) 822-1100
Facsimile: (202) 822-1111

TEB/nrp